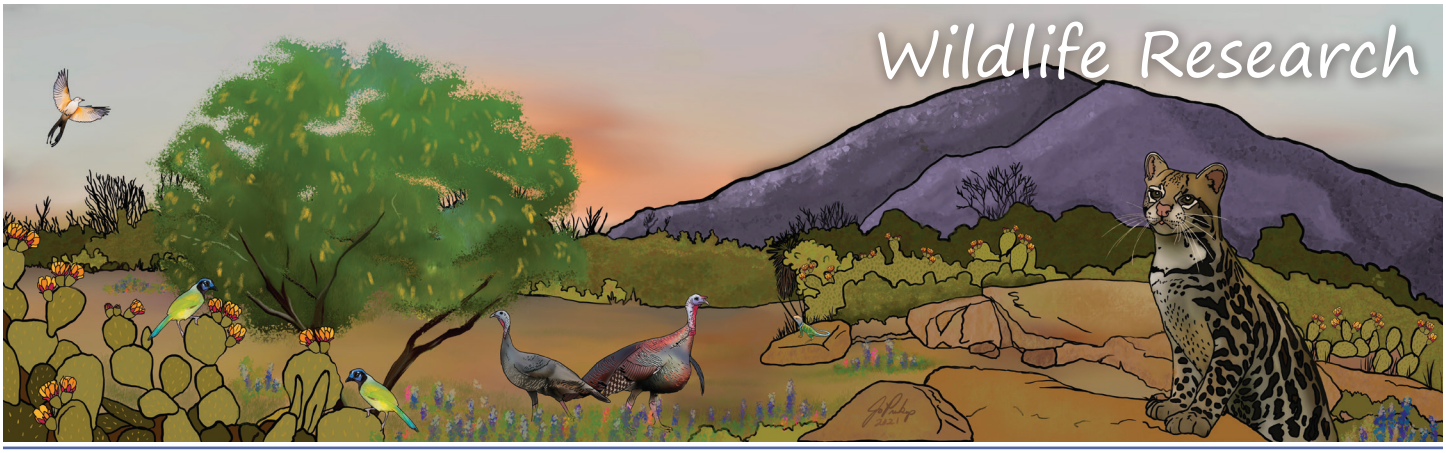

Quarterly Newsletter of the Caesar Kleberg Wildlife Research Institute
at Texas A&M University-Kingsville

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Why Are Nilgai so Wary? Neophobia in Nilgai

by Randy W. DeYoung

Native to India, nilgai antelope were introduced to the South Texas region during the 1930's. Nilgai have since established free-ranging populations in the coastal plains, where they are a unique and highly valued game resource. Part of the allure is their status as an exotic, which means they can be hunted year-round with no bag limits. The meat is excellent, and one adult nilgai can nearly fill a freezer. However, nilgai are also valued because they are elusive and challenging to hunt. Not only are nilgai extremely wary, but unlike most other animals, they do not respond to feed or bait. The bait question has puzzled hunters and scientists alike for decades. Native deer and elk, as well as other exotics, will readily learn to use feed or bait–-why not nilgai?

Recent research conducted by the CKWRI in collaboration with the USDA Agricultural Research Service revealed some interesting insights into nilgai behavior. Our main objective was to help control cattle fever ticks by minimizing the role that nilgai and deer play in maintaining ticks on the landscape. Any medication to treat wild animals for ticks must either be delivered in feed or physically applied to the animal. We first studied whether wild nilgai could learn to eat feed, which would allow a feed-based tick treatment, similar to that used in white-tailed deer. We put wild-caught nilgai and captive nilgai in a high-fenced enclosure and monitored feed use with remote cameras; captive nilgai were accustomed to eating feed and readily used feeders. Wild and captive nilgai mingled and interacted extensively, but no wild-caught nilgai ever ate feed. Our only other option was testing physical application via a remotely triggered spray device. We deployed spray devices at the only sites we knew nilgai of all ages would re-visit: places where nilgai and other wildlife cross underneath livestock fences. We monitored crossing sites with remote cameras and we also followed nilgai movements using GPS radio-collars. Deer and other wildlife quickly acclimated to the presence of the sprayers and used the crossings often. However, we had few photos of nilgai at crossing sites with sprayers. We confirmed that GPS-collared nilgai crossed fences, suggesting that nilgai avoided using crossing sites where sprayers were present.

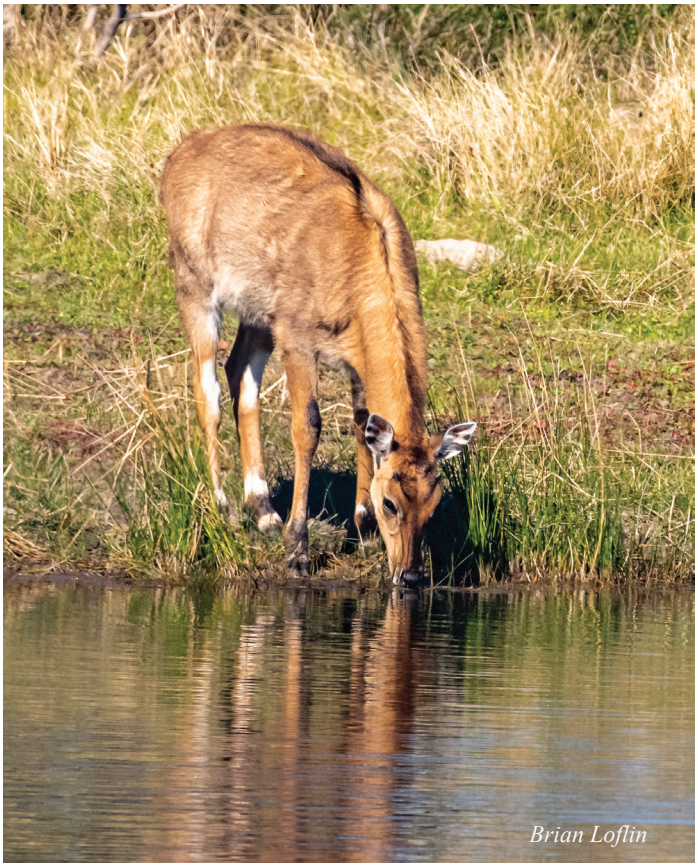
Nilgai's wariness makes it a challenging game species.

Dr. Randy W. DeYoung is a Research Scientist and Professor at the CKWRI. ~

What Do They Eat?

Opossums eat a variety of foods, both dead and alive. They are scavengers, but they also eat plants, fruits, insects, and other small animals, including venomous snakes. (San Diego Zoo. 2024. Animals, Opossum, animals.sandiegozoo.org)

Livestock often shun new foods, a behavior that may help them avoid eating toxic plants. However, nilgai seem to have a strong general neophobia behavior, a fear of anything new or unfamiliar. In this sense, they seem to be more like a coyote than other ungulates. Why nilgai are so wary of new things is less clear. The degree of neophobia varies by individual and species; it may be that nilgai happen to be more hard-wired for extreme wariness than other species. Alternatively, nilgai in South Texas have been hunted year-round for decades. This may have either selected for more wary individuals or simply promoted a strong learned wariness that is passed to others. Regardless, it is this extreme wariness that makes nilgai hunts so challenging and highly sought after. As a hunter, I personally hope nilgai never overcome this neophobia, although I do wish they would cooperate more in the management of cattle fever ticks. ~



Water sources are valuable resources for nilgai in the South Texas heat.

Did You Know?

Hummingbirds are the only birds able to fly backwards. (Texas Parks & Wildlife Department. 2024. Wildlife Fact Sheets, Ruby-throated hummingbird, tpwd.texas.gov)

CKWRI News

New Board Members

We recently welcomed two new Advisory Board members, Whit Jones of Agua Nueva, Texas and James McAllen Jr. of Linn, Texas. We are grateful for their leadership and willingness to serve!

Whit Jones

James McAllen Jr

The Henry Hamman Program for Hill Country Conservation and Management

We are excited to announce our new Henry Hamman Program for Hill Country Conservation and Management, which will serve as a long-term monitoring, research, and outreach program based in Leakey, Texas. The program will rely on CKWRI faculty, graduate students, and various collaborators and partners, to design and carry out research and monitoring projects. The insights we generate will be shared with landowners across the Hill Country to help them steward this unique and fragile landscape. The program begins this summer with two projects on key vegetation and wildlife foundations. More to come as this exciting new endeavor takes shape!

Texas Chapter of The Wildlife Society Student Awards

• Georgina Eccles, PhD student, 2nd place, Clarence Cottam awards

•Joshua Allison, Undergraduate, 3rd place, Plant Identification Contest

• TAMUK Plant ID Team (Josh Allison, Awen Duniban, Clayton Golden, Andrew Mendiola, Carolina Rocha, John Velasquez), 3rd place

The South Texas Lion Project Arrives at the CKWRI

by Katie McDaniel, Chloe Nouzille and Lisanne Petracca

Research into wild cats at the Caesar Kleberg Wildlife Research Institute (CKWRI) has long focused on the federally-listed ocelot, a wild cat whose entire range in the United States lies squarely within South Texas. However, there is another wild cat that roams throughout South Texas brush country that may be even more elusive: mountain lions, also known as cougars, pumas, or catamounts. Mountain lions are the second-largest wild cat in the Americas, second only to jaguars, and currently range from the Canadian Yukon to the tip of South America. While mountain lions are present within West and South Texas, the species has not been trapped and radio-collared in South Texas in nearly 30 years.

Enter the South Texas Lion Project, a brand-new research endeavor led by Drs. Lisanne Petracca, Michael Cherry, David Hewitt, Clay Hilton, Randy DeYoung, and Levi Heffelfinger at CKWRI, along with partners from Texas Parks and Wildlife Department, the Borderlands Research Institute, the U.S. Fish and Wildlife Service (USFWS), and many private landowners. This project was made possible thanks to a contract with U.S. Customs and Border Protection and USFWS.

A GPS collar is placed on a sedated mountain lion, P01, the first lion collared as part of this project. All trapping and handling of animals was conducted with proper TPWD permits and approved university animal care protocols.

What is the goal of the project? Led on the ground by Ph.D. student Chloe Nouzille and Master's student Katie McDaniel, the South Texas Lion Project team seeks to understand mountain lion ecology in the context of the U.S. – Mexico border barrier system. Does this steel structure, and associated impacts from brush clearing, road patrols, and noise/light pollution, affect the densities, genetic health, and/or movement ecology of these cats? If so, what are some recommendations for mitigation, and how can they be implemented? This work is just getting started. The team has additional interests in exploring mountain lion survival, reproductive rates, and predation on managed species such as white-tailed deer.

How is the project progressing? The team's field season began in February 2024, and trapping of mountain lions (for collection of genetic samples and placement of GPS collars) focused on the "Golden Triangle" between Eagle Pass, Cotulla and Laredo. Given that Texas is largely a private lands state, the team is eternally grateful to the landowners who have signed on to allow access to 200,000 acres of land for CKWRI researchers. The research team is also using camera traps to survey mountain lions more broadly in the borderlands area from Laredo to Brownsville.

Perhaps the most exciting news is saved for last: over a six-day period at a cooperator's ranch outside Eagle Pass, the South Texas Lion Project team successfully collared two mountain lions! These lions were named P01 and P02. P01 is a ~3-year-old male who weighed 118 pounds at the time of capture. P02 is another young male, estimated to be 1.5 years old and weighs 116 pounds. Both animals were released and are currently traversing the ranchlands of South Texas while their movements are being closely monitored by the team, with a location recorded every hour.

Those of us at the South Texas Lion Project are looking forward to growing this project and expanding our landowner network. Access for the CKWRI researchers can range from supplying genetic samples (e.g., tissue) from harvested individuals, to placement of camera traps, to full access for trapping and collaring of mountain lions. If you know a landowner who may want to be a part of the project, please email us at southtexaslionproject@gmail.com. All of us look forward to keeping the CKWRI supporters updated as the project progresses – please wish us luck in our capturing and collaring efforts!

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Mountain lion P02 is ready to return to roaming the South Texas brush country after being successfully collared by the CKWRI team.

By The Numbers

>7,000 Is how many feathers a bald eagle has (American Eagle Foundation. 2024. Bald Eagle Biology, eagles.org).

More Awards from the Texas Chapter of The Wildlife Society

• A Talk on the Wild Side podcast hosted by Sandra Rideout-Hanzak and Alynn Martin, Best Digital Media

•Jessica Johnston and Hunter Vasquez, Undergraduates, 1st place and 3rd place, respectively, Poster Presentations

• Graduate Student, Bree Green, and faculty members, Levi Heffelfinger and Alynn Martin, various Photography Awards